



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

2008

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|--------------------|
| 09/723,013 | 11/27/2000 | Michael H. Coden | 100.046US02 | 6127 |
| 34206 | 7590 | 12/28/2005 | EXAMINER | |
| FOGG AND ASSOCIATES, LLC P.O. BOX 581339 MINNEAPOLIS, MN 55458-1339 | | | | NGUYEN, STEVEN H D |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2665 | |

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/723,013 | CODEN, MICHAEL H. | |
| | Examiner | Art Unit | |
| | Steven HD Nguyen | 2665 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 July 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 52-116 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 52-116 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 109-110, 113 and 116 are rejected under 35 U.S.C. 102(b) as being anticipated by McCreary (USP 5384566).

McCreary discloses (Figs 1-4 and col. 1, lines 5 to col. 9, lines 50) a ring network comprising a plurality of ring switches (Fig 1, Ref 20) wherein each of ring switch comprising ring in port and ring out port and a local port (Fig 2), receiving a packet from a ring in port, routing the packet that destined for a network device of local port and routing the packet is not destined to a local device to ring out port for transmitting the packet back onto the ring without using token or encapsulating, discarding the packet if source address of the packet is associated with a local device, (col. 6, lines 11 to col. 7, lines 13).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2665

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 52-53, 56, 58, 60-62, 66-67, 70, 73-76, 78-80, 82-84, 86-90, 93-99, 102-103, 105-106, 109-110, 112-113 and 116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi (USP 4933937) in view of McCreary (USP 5384566).

Regarding claims 52-53, 56, 58, 60-62, 66-67, 70, 73-76, 80, 82-84, 86-90, 93-99, 102-103, 105-106, 109-110, 112-113 and 116, Konishi discloses (Figs 1-6 and col. 1, lines 5 to col. 6, lines 52) a ring switch (Fig 2) comprising at least one port for coupling to the ring (11) and a local port for coupling to LAN (13-1); at least one table for learning the source and destination address of the packet which is received into the ring switch (Figs 5-6). However, Konishi does not disclose a method and system for determining if the received packet from the ring should be forwarded to the local port or ring port based on the table by comparing destination address with a table and removed from the ring by comparing the source address or destination address of the received packet. In the same field of endeavor, McCreary discloses (Figs 1-4 and col. 1, lines 5 to col. 9, lines 50) a ring switch for receiving a packet from a ring and routing the packet to a local port or back onto the ring by comparing the destination address of the data packet with the address of the device in the local network, if the destination address is match with a local

address, the packet is removed from the ring and forwarding at least one device on the local network based on destination address or group address via a local port, otherwise the packet is rerouted back onto the ring and the ring switch removes the packet from the ring based on the source or destination address of the packet without using token or encapsulating (See Figs 1-2 and col. 6, lines 11 to col. 7, lines 13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for removing the packet on the ring based on source or destination address of a packet and placing the packet back onto the ring based on the destination address of the packet as disclosed by McCreary into the method and system of Konishi. The motivation would have been to improve the throughput of the ring.

6. Claims 54, 55, 57, 59, 63-65, 68-69, 71-72, 77-79, 81, 85, 91-92, 100-101, 104, 107-108, 111 and 114-115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi and McCreary as applied to claims 52, 61, 67, 80, 83, 86, 93, 102 and 109 above, and further in view of Chin (USP 5617421).

Regarding claims 54, 63, 68, 81, 85, Konishi and McCreary fail to disclose a table with an indication that the data packets that destination for source address should transmitted back on the ring. In the same field of endeavor, Chin discloses a table with an indication that the data packets that destination for source address is local at a remote switch (Col. 13-14, table 1-3, local or remote bit).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for storing an indication in the table for indicating if the source address is local address or remote address as disclosed by Chin into the

method and system Konishi and McCreary. The motivation would have been to provide a path between the source and destination.

Regarding claims 55, 64, 69, 71-72, 77-79, 104 and 111, Konishi and McCreary fail to disclose a bi-direction ring port. However, in the same field of endeavor, Chin discloses a ring switch comprising a bi-direction port (Fig 4, Link AB).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a bi-direction port into a ring switch as disclosed by Chin into the method and system of Konishi and McCreary. The motivation would have been to provide a redundant path between the ring switch.

Regarding claims 57, 59 and 65, Konishi and McCreary fail to disclose PCB, PCI. However, the examiner takes an official notice that a method and system for implementing a circuit on a PCB and having PCI are well known and expected in the art at the time invention was made to increase speed and cost to build the ring switch.

Regarding claims 91-92, 100-101, 107-108 and 114-115, Konishi and McCreary fail to disclose a step of discarding the packet based on ring switch ID or hop count. However, the examiner takes an official notice that a method and system for discarding the packet based on a switch ID and hop count are well known and expected in the art at the time of invention was made in order to improve the through put of the network.

Response to Arguments

7. Applicant's arguments filed 04/11/05 have been fully considered but they are not persuasive.

In response to pages 15-16, the applicant states that McCreary fail to disclose a step of routing the packet to a node or output port of the switch based on the destination. In reply, McCreary discloses a method and system for receiving a packet into a ring switch node "20" which receives the packets from the ring network 12 and storing it in the buffer and determining if the packet belong to one of node 22 or 24. if yes, the ring switch node copies the packet from the buffer for forwarding to at least one port of the switch ring (it reads on route the packet from the buffer of the ring switch of application to the destination station wherein the original packet is still stored in the buffer until it discards or overwrite by another packet) and the frame is discarded at the ring switch (Fig 4, Ref 81) if the frame already route at least one port of the ring switch which has a destination node coupling to it. Therefore, the teaching of McCreary performs the claimed invention 109-110, 113 and 116.

In response to pages 17-18 and 20-21, the applicant states that McCreary fail to disclose (1) a ring switch for switching packets from its ring and local ports in order to forward the data packet to its destination; (2) removing packets from the ring at a local port switch when a destination address indicates the packet belong to a station coupled to a local port; (3) if the destination address belong to a station coupled to a local port, the packet is transferred to that local port; if not transfer the packet to output port switch ring; (4) receiving packet from a ring port, determining if the packet belong to a station of local port switch by comparing destination address of the packet with information address of the ring switch if match then forwarding the packet to the local port of the ring switch; (5) determining if the receiving packet belong to a station of local port switch, then route the packet to local port and prevent the packet to be forwarded to output port ring; (6) routing the data packet that belongs to a station that coupled to

a local port switch; (7) switching the data packet that belongs to a station that coupled to a local port switch. In reply, McCreary discloses a method and system for receiving a packet into a ring switch node “20” which receives the packets from the ring network 12 and storing it in the buffer and determining if the packet belong to one of node 22 or 24. if yes, the ring switch node copies the packet from the buffer for forwarding to at least one port of the switch ring (it reads on route the packet from the buffer of the ring switch of application to the destination station wherein the original packet is still stored in the buffer until it discards or overwrite by another packet) and the frame is discarded at the ring switch (Fig 4, Ref 81) if the frame already route at least one port of the ring switch which has a destination node coupling to it. If the destination address is not belonging to a station that coupled to a local port, switch the frame to the output port ring switch (Fig 2A discloses a ring switch includes ring in, ring out and local port) . Therefore, the teaching of McCreary performs the claimed invention 52, 61, 67, 75, 80, 86, 93, 102 and 116.

In response to pages 19, the applicant states that Konishi and McCreary fail to disclose (1) a table that is adapted to associate with address of a network device with the ring port out when the packet is received at the ring in port and (2) storing source address in table for the first ring switch that indicates that the data packet originated from a network device, not includes another of the plurality of ring switches, associated with a second, different port of the first ring switch so as to allow unidirectional transmission on the ring network. In reply, Konishi discloses a table that is adapted to learn procedure the address of LAN “ring switch address” on the backbone network 11 and associating it with ring out port (col. 4, lines 26-29) and implicitly discloses storing source address in table “fig 2, ref 33” for the first ring switch that indicates that the data packet originated from a network device, not includes another of the plurality of ring

switches, associated with a second, different port of the first ring switch so as to allow unidirectional transmission on the ring network because the backbone network is a unidirectional transmission ring network.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hartmann (USP 6018782) discloses a method and system for routing packet between ring in port, ring out port and local port.

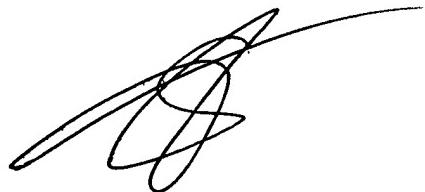
9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven HD Nguyen
Primary Examiner
Art Unit 2665
December 22, 2005